Recommended Additional Reading

Ade, Robin (Illustrator), **The Trout and Salmon Handbook**
FactsOnFile
A guide to the characteristics and sporting qualities of Atlantic salmon, Pacific salmon (Coho, chinook and sockeye), brown trout, rainbow trout and steelhead, the chars, and more.

Balcer, Mary D., Korda, Nancy L., Dodson, Stanley I., **Zooplankton of the Great Lakes: A Guide to the Identification and Ecology of the Common Crustacean Species**
University of Wisconsin Press
A guide to the identification and ecology of the common crustacean species.

Behnke, Robert J., Tomelleri, Joseph R. (Illustrator), McGuane, Thomas, Proebstel, Donald S., Scott, George (Editor), **Trout and Salmon of North America**
Free Press
In ichthyology, the genus Oncorhynchus includes the world's 10 species of trout and salmon. To the everlasting thankfulness of America's 35 million anglers, North America is home to nine species of these elusive and delicious fish (five salmon and four trout). Behnke (Native Trout of Western North America), professor emeritus of fishery and wildlife biology at Colorado State University, has brought his more than 50 years of studying, and fishing for salmon and trout, to wonderful effect. He provides readers with an authoritative compendium of the evolution, biology, ecology, habitats and behaviors of these prized game fish. A capsule legend that includes scientific name, other common names, habitat, size, life span and diet accompanies each entry, amazingly illustrated by Tomelleri (Fishes of the Central United States), whose fish seem to shimmer on the pages. Habitat maps, which include coastal waters, rivers, streams and lakes, are detailed and specific enough to be taken on fishing excursions. The book includes a good deal of fishing lore, as in the notations that describe the best flies, bait and lures for specific types of fish and locales. Behnke also ponders some of the more philosophical aspects of ecology and human responsibility for the environment. Along with full and clearly written scientific explanations, statistics and analysis, the author provides anecdotal and historical details that make this not just a field guide, but a fascinating read for those interested in the natural world. For the last word on trout and salmon, look no further than this guide.

Bogue, Margaret Beattie, **Fishing the Great Lakes: An Environmental History, 1783-1933**,
University of Wisconsin Press
Fishing the Great Lakes is a sweeping history of the destruction of the once-abundant fisheries of the great "inland seas" that lie between the United States and Canada. Though lake trout, whitefish, freshwater herring, and sturgeon were still teeming as late as 1850, Margaret Bogue documents here how overfishing, pollution, political squabbling, poor public policies, and commercial exploitation combined to damage the fish populations even before the voracious sea lamprey invaded the lakes and decimated the lake trout population in the 1940s.
What is amazing is that some of the same problems plague us today with some of the same issues in resolving them (e.g. common regulations between US and Canada, habitat loss, etc.).

Claudi, Renata (editor), Leach, Joseph H., **Nonindigenous Fresh Water Organisms: Vectors, Biology, and Impacts**
Lewis Publishers
Alien species invade aquatic ecosystems by through both intentional and accidental means. Non-indigenous Freshwater Organisms focuses on this infringement in North American aquatic

ecosystems. The 31 chapters measure the devastating ecological, and sometimes economic, impact caused by the encroachment of species such as the American Bullfrog and the Zebra mussel. . The book is organized by primary pathway of introduction, such as intentional introductions, aquarium and water garden trade, climate changes, or canals and diversions. Case studies of the screw snail, zebra mussel, and American bullfrog are included among other more general studies of methods of introduction and models of the invasion process. A concluding section includes three chapters discussing why some introductions succeed and others fail.
An excellent book worth a 5 star rating on the subject matter.

Cole, Gerald A., **Textbook of Limnology**
Waveland Press
A classic introduction to the science of inland waters, revised and updated to incorporate the many changes in limnologic procedures since the third edition of 1983.
Perhaps the best book available on the subject of limnology! Praised for its clear handling of a diverse and complex subject, this classic, illustrated volume presents a useful blend of practical and analytical limnology. Readers will welcome the author s clear writing and concise coverage of topics.

Craford, Stephen S., **Salmonine Introductions to the Laurentian Great Lakes : An Historical Review and Evaluation of Ecological Effects**
NRC Research Press
This publication provides an historical review and evaluation of documented ecological effects associated with salmonine introductions to the Laurentian Great Lakes. The introduction of salmonines to the Great Lakes date back to the 1870s, when natural populations of native salmonines in the Great Lakes were in severe decline.
Using established evaluation protocols, it was determined that there is evidence of significant ecological effects in six different categories: (1) diseases and parasites, (2) predation on native species, (3) competition for limiting resources, (4) genetic alteration, (5) environmental alteration and (6) community alteration. Taken together, this body of evidence supports the conclusion that the ongoing introduction of non-native salmonines poses an ecologically-significant risk to the Great Lakes ecosystem and its native organisms, and that the introductions should be terminated.

Diana, James S. **Biology and Ecology of Fishes**,
Biological Sciences Press
Written for those interested in the biology and ecology of fish. This text is widely used as a introductory text in university level classes in fisheries biology/ecology

Ecosystem Approaches for Fisheries Management : Symposium Proceedings Held in Anchorage Alaska.
Alaska Sea Grant
This volume presents key research on how ecosystem information can be incorporated into practical fishery management. *Ecosystem Approaches for Fisheries Management* has fifty papers from scientists in all parts of the world, presented at the 1998 Wakefield Fisheries Symposium "Ecosystem Considerations in Fisheries Management" in Anchorage, Alaska. The symposium was held jointly with the annual meeting of the American Fisheries Society Western Division and Alaska Chapter.
Section headings are physical and environmental effects, species interactions, concepts and tools for management, anthropogenic influences, habitat and spatial considerations, and whole ecosystem approaches.

Dobbs, David, **The Great Gulf: Fishermen, Scientists, and the Struggle to Revive the World's Greatest Fishery**
Island Press
In the late 1980s, the fishery that had sustained New England coastal communities for nearly 500 years began to collapse from overfishing and poor management. In the face of this crisis, the fishermen and scientists who know this ocean best have become locked in a strange, bitter conflict over how to count the fish that remain. The gulf of distrust between them, which hauntingly echoes deeper discords in our culture, threatens to destroy any chance at recovering our nation's first bounty.
If you've participated in any of the Lake Ontario stocking and fish management discussions, reading this will ring familiar in many places.

Fuller, Pam L., Nico, Leo G., Williams, James D. **Nonindigenous Fishes Introduced into Inland Waters of the United States**
American Fisheries Society
Whether termed exotics, transplants, or aliens, nonindigenous species are those that enter an ecosystem beyond their historic range. This book is based on an extensive and ongoing electronic database of more than 500 nonindigenous fish taxa (species, hybrids, and unidentified forms) in U.S. inland open waters, and is comprised primarily of summary accounts of each taxa. Also, the book summarizes the historical trends and spatial patterns of fish introductions nationwide and gives an overview of the database itself, which is a major subset of a larger research database of other nonindigenous aquatic species.

Hynes, H.B.N., **The Ecology of Running Waters**
The Blackburn Press
In this reprinted classic (originally published in 1971) Noel Hynes compiled a comprehensive, critical review of the literature pertaining to streams. Included are physical and chemical characteristics of flowing waters, plantlife, the benthos, fish and finally, man's effects on watercourses. The book continues to be widely read and influential in the field. Available from Blackburn Press.

Johnson, Paul C., **The Scientific Angler**
Charles Scribner's Sons
This is an older book (circa 1984), but the library copies are well worn so it must get a lot of reading. The color plates on underwater view of colors and fishing line are worth getting the book off the shelf. If you can find a copy to buy, it's worth adding to your collection. Sections on fish sensory perception and their environment are particularly good. Probably one of the best books I've read on angling.

Kohler, C.C., Hubert, W.A., editors, **Inland Fisheries Management in North America, Second Edition**
American Fisheries Society

This revised edition updates a major college text and professional reference book. Authored by 42 eminent educators and fisheries managers, it reflects the rapid changes in managing inland fisheries since the first edition, especially in applying ecosystem approaches and adopting larger spatial scales for management. The book covers fishery assessments, habitat and community manipulations, and common practices for managing stream, river, lake, and anadromous fisheries. Chapters on history; ecosystem management; management processes; communications with the public; introduced, undesirable,

and endangered species; and the legal and regulatory frameworks provide the context for fisheries management.

McGinn, Nature A., (Editor), **Fisheries in a Changing Climate**,
American Fishereies Society

The Fisheries in a Changing Climate symposium was held at the American Fisheries Society 2001 Annual Meeting. This symposium proceedings volume represents the culmination of a multi-agency effort, organized by AFS, Sea Grant and others, to bring together scientists from U.S. and Canadian governmental agencies and universities to discuss fisheries and climate change. These scientists, faced with the release of the third global climate change assessment by the Intergovernmental Panel on Climate Change (IPCC) and the continued debate over the Kyoto Protocol, presented useful reviews and exciting new research on the past, present, and future impacts of climate change and variability on commercial, recreational, marine and freshwater fisheries. The papers in the proceedings cover a wide geographical area from oceanic fisheries in the Northwest Atlantic and Northeast Pacific to inland fisheries in the Great Lakes and Western U.S. rivers and streams. In addition to fisheries science research, some chapters detail the impacts of climate change on aquatic ecosystems and fisheries policy and management. This comprehensive volume will be a valuable resource for anyone with an interest in the topic and will serve as a guide to those continuing to research the future of fisheries in a changing climate.

Migdalski, Ed, **The Inquisitive Angler**
Lyons and Burford Publishers
If you're interested in something more about the fish you land than what it is and how to cook it, but don't want to dig through an icthyology textbook, this might be a good read. While the flow is a bit choppy in spots, and the species discussed are marine environment biased, it is an interesting read.

Mullin, Michael M., **Webs and Scales: Physical and Ecological Processes in Marine Fish Recruitment**
Washington Sea Grant
This publication seeks to emphasize the confluence of two well established lines of research aimed at understanding variability in marine pelagic populations and communities. "Webs" refers to food webs in the plankton: linkages between groups of organisms based on what eats what, with the emphasis on determining rates of accumulation and transfer of energy. "Scales" refers both to ranges of space and time and to an emphasis on the ecology of larval fish (most of which are planktivorous)and their recruitment to the population of adults.

Pauly, Daniel, MacLean, Jay, **In a Perfect Ocean: The State of Fisheries and Ecosystems in the North Atlantic Ocean**
Island Press
Recent decades have been marked by the decline or collapse of one fishery after another around the world, from swordfish in the North Atlantic to orange roughy in the South Pacific. While the effects of a collapse on local economies and fishing-dependent communities have generated much discussion, little attention has been paid to its impacts on the overall health of the ocean's ecosystems.
In a Perfect Ocean: The State of Fisheries and Ecosystems in the North Atlantic Ocean presents the first empirical assessment of the status of ecosystems in the North Atlantic ocean. Drawing on a wide range of studies including original research conducted for this volume, the authors analyze 14 large marine ecosystems to provide an indisputable picture of an ocean whose ecology has been dramatically altered, resulting in a phenomenon described by the authors as "fishing down the food web." The book:

- provides a snapshot of the past health of the North Atlantic and compares it to its present status
- presents a rigorous scientific assessment based on the key criteria of fisheries catches, biomass, and trophic level
- considers the factors that have led to the current situation
- describes the policy options available for halting the decline
- offers recommendations for restoring the North Atlantic

An original and powerful series of maps and charts illustrate where the effects of overfishing are the most pronounced and highlight the interactions among various factors contributing to the overall decline of the North Atlantic's ecosystems.
This is the first in a series of assessments by the world's leading marine scientists, entitled "In a Perfect Ocean." The State of Fisheries and Ecosystems in the North Atlantic Ocean is a landmark study, the first of its kind to make a comprehensive, ecosystem-based assessment of the North Atlantic Ocean, and will be essential reading for policymakers at the state, national, and international level concerned with fisheries management, as well for scientists, researchers, and activists concerned with marine issues or fishing and the fisheries industry

Pearcy, William G., **Ocean Ecology of North Pacific Salmonids**
Washington Sea Grant
A compendium of Northeast Pacific salmon ecology, encompassing all five salmon and two trout species of Oncorhynchus--with Oregon coho salmon, the author's specialty for the past decade, acting as centerpiece. It sheds some interesting insights on the life cycles of salmonids. It looks at both hatchery and wild stocks, and generally wild stocks to fare better than hatchery ones (returns). A number of interesting things show up, like a year class of hatchery coho's that returned above average number of jacks, but when they matured, that year class had a near record low return. It points out the importance of the bottom of the food web in early growth and survival of salmonids.

Smith, Lavett C., Friedman, Howard (Illustrator), Cooper, Edwin L. (Editor), **The Inland Fishes of New York State**New York State Department of Environmental Conservation
Published by New York Department of Environmental Conservation, an excellent reference on fish species found in New York State waters. Contains information on identification, descriptions, habitat, distributions, life histories, food and feeding on each species.

Taylor, William W., Ferreri, C. Paola, editors **Great Lakes Fisheries Policy and Management : A Binational Perspective**
Michigan State University Press
The Laurentian Great Lakes comprise an expansive and complex ecosystem that holds 20 percent of the world's surface fresh water supply. Their habitat diversity supports a wide variety of fish, which in turn supports valuable fisheries that contribute to the economic well-being and the general quality of life in the region. Responsibilities for the management of these resources rest with the federal governments of the United States and Canada, eight state governments, and one provincial government. Since the fish of the Great Lakes do not recognize jurisdictional boundaries, controversies over allocation and management frequently occur. Great Lakes Fisheries Policy and Management focuses upon the United States-Canada experience with shared fishery resources and encompasses our current understanding of the ecological, sociological, and policy issues that face Great Lakes fishery managers and policymakers in both countries. The chapters of this book were written by respected Great Lakes scientists from federal, state, and provincial management agencies.

Werner, Robert G., **Freshwater Fishes of New York State**
Syracuse University Press
New York State has more than 3.5 million acres of lakes and 70,000 miles of streams—abundant habitat for many species of fish. What kinds of fish live in these waters? How can they be identified? Where do they live? What do they eat? When do they spawn? How large do they get?
Writeen for the aateur naturalist and fisherman this book provides answers to these questions and many others.

Additional Suggested Readings

Bigler, Brian S., Welch, David W., Helle, John H. 1996 **A review of size trends among North Pacific salmon (*Oncorhynchus* spp.)** *Canadian Journal of Fisheries and Aquatic Sciences* 53: 455-465

Blackwell, Bradley F., Stapanian, Martin A., Weseloh, D.V.Chip, **2002 Dynamics of the double-crested cormorant population on Lake Ontario** *Wildlife Society Bulletin* 30(2)

Brandt, Stephen, 2002 **Effects of Diporeia declines on fish diet, growth and food web dynamics in southeast Lake Michigan** Great Lakes Environmental Research Laboratory

Bushnoe, Tara M., Warner, D.M., Rudstam, L.G., Mills, E.L. 2003 ***Cercopagis pengoi* as a new prey item for alewife (*Alosa pseudoharengus*) and rainbow smelt (*Osmerus mordax*) in Lake Ontario** *Journal of Great Lakes Research* 29 No.2

Connelly, Nancy A., Brown, Tommy L., Knuth, Barbara A., 2000 **Do Anglers and Fishery Professionals Think Alike?** *Fisheries*

Hardin, Garett 1968 **The Tragedy of the Commons**

Hall, Spencer R., Pauliukonis, Nijole K., Mills, E.L., Rudstam, L.G., Schneider, C.P., Lary, S.J., Arrhenius, F., **A comparison of total phosphorous, chlorophyll a, and zooplankton in embayment, nearshore, and offshore habitats of Lake Ontario** *Journal of Great Lakes Research* 29

Haynes, James M., Stewart, T.W., Cook, G.E. **Benthic microinvertabrate communities in southwestern Lake Ontario following invasion of *Dreissena*: continuing change** *Journal of Great Lakes Research* 25 No. 4

Jones, Michael L., Koonce, Joseph F., O'Gorman, Robert, 1993 **Sustainability of Hatchery-Dependent Salmonine Fisheries in Lake Ontario: The Conflict between Predator Demand and Prey Supply** *Transactions of the American Fisheries Society* 122:1002-1018

Jude, David, Stoermer, Eugene, Johengen, Thomas, Perakis, A.N., 2002 **Non-Indigenous Species in the Great Lakes: Ecology, Interactions, and Future Research Directions** University of Michigan

Klumb, Robert A., Rudstam, L.G., Mills, E.L., Schneider, C.P., Sawyko, P.M. 2003 **Importance of lake Ontario embayments and nearshore habitats as nurseries for larval fishes with emphasis on alewife (Alosa pseudoharengus)** *Journal of Great Lakes Research* 29 No. 3

Lampman, Gregory G., Makarewicz, J.C. **The phytoplankton zooplankton link in the Lake Ontario food web** *Journal of Great Lakes Research* 25 No. 3

Lange, Robert, Smith, Phil, 1994 **Ecosystem Watch: Status of the Lake Ontario Ecosystem**

Link, Jason S. 2002 **What Does Ecosystem-Based Fisheries Management Mean?** *Fisheries* Vol. 27 No. 4

Link, Jason S. 2002 **Ecological Considerations in Fisheries Management: When Does It Matter?** *Fisheries* Vol 27 No. 4

Madenjian, Charles P., Fahnenstiel, Gary L., Johengen, Thomas H., Nalepa, Thomas F., Vanderploeg, Henra A, Fleischer, Guy W., Schneeberger, Philip J., Benjamin, Darren M., Smith, Emily B., Bence, James R., Rutherford, Edward S., Lavis, Dennis S., Robertson, Dale M., Jude, David J. and Ebner, Mark P. 2002 **Dynamics of the Lake Michigan food web 1970-2000** *Canadian Journal of Fisheries and Aquatic Sciences* 59: 736-753

Madenjian, Charles P., DeSorcie, Timothy J., Holuszko, Jeffery D., 2002 **Status and Trends of Prey Fish Populations in Lake Michigan, 2001** Great Lakes Fishery Commission, Lake Michigan Committee Meeting

Meyers, Philip A., 2002 **Impacts of Climate Change on the Great Lakes Basin: Perspectives From The Past and Prospects For The Future**, Michigan Sea Grant

Mills, E.L., Casselman, J.M., Dermott, R, Fitzsimons, J.D. Gal, G., Holek, K.T., Hoyle, J.A., Johannsson, O.E., Lantry, B.F., Jakarewicz, J.C., Millard, E.S., Munawar, I.F., Munawar, M. O'Gorman, R., Owens, R.W., Rudstam, L.G., Schaner, T. and Stewart, T.J. 2003 **Lake Ontario: food web dynamics in a changing ecosystem (1970-2000)** *Canadian Journal of Fisheries and Aquatic Sciences* 60: 471-490

Nalepa, Thomas, F., Hartson, David J., Fanslow, David L, Lang, Gregory A., Lozano, Stephen J., 1998 **Declines in benthic macroinvertabrate populations in southern Lake Michigan, 1980-1993** *Canadian Journal of Fisheries and Aquatic Sciences* 55: 2402-24133

O'Gorman, R., Owens, R.W., Lantry, B.F. 2003 **Status of Major Prey Fish Stocks In The U.S. Waters of lake Ontario, 2002** Department of the Interior, USGS, BRD, Lake Ontario Biological Station

Post, John R., Sullivan, Michael, Cox, Sean, Lester, Nigel P., Walters, Carl J., Parkinson, Eric A., Paul, Andrew J., Jackson, Leyland, Shuter, Brian J., **Canada's Recreational Fisheries: The Invisible Collapse?** *Fisheries* 27 No.1

Rand, Peter S., Lantry, Brian F., O'Gorman, Robert, Owens, Randall W., Stewart, Donald J. 1994 **Energy Density and Size of Pelagic Prey Fishes in Lake Ontario, 1978-1990: Implications for Salmonine Energetics** *Transactions of the American Fisheries Society* 123:519-534

Rand, Peter S., Steawart, Donald J. 1998 **Prey Fish exploitation, salmonine production nd pelagic food web efficiency in Lake Ontario** *Canadian Journal of Fisheries and Aquatic Sciences* 55: 318-327

Ricciardi, Anthony, 2001 **Facilitative Interactions among aquatic invaders: is an "invasional meltdown" occurring in the Great Lakes** *Canadian Journal of Fisheries and Aquatic Sciences* 58: 2513-2525

Vanderploeg, Henry 2002 **Changes in Pelagic Food Web of Southern Lake Michigan: A Food Web under Stress from Non-Indigenous Species?** Great Lakes Envornomental Research Laboratory

Wallace, Richard K., Hosking, William, Szedlmayer, Stephen T., **Fisheries Management for Fishermen: A manual for helping fishermen understand the federal management process**, Auburn University Marine Extension and Research Center, Sea Grant Extension